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Substitute for form 1448A/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 1 of 5

### Complete if Known

Application Number	10/705,470
Filing Date	November 10, 2003
First Named Inventor	Robert L. Fair et al.
Group Art Unit	2184
Examiner Name	Not yet assigned
Attorney Docket Number	112056-0123

### U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
AD		10/027,634		EDWARDS et al.		U.S. Patent Application filed December 21, 2001 entitled FILE SYSTEM DEFRAGMENTATION TECHNIQUE VIA WRITE ALLOCATION
AD		10/215,917		PAWLOWSKI et al.		U.S. Patent Application filed August 9, 2002 entitled MULTI-PROTOCOL STORAGE APPLIANCE THAT PROVIDES INTEGRATED SUPPORT FOR FILE AND BLOCK ACCESS PROTOCOLS
AD		10/705,493		HAMILTON et al.		U.S. Patent Application filed November 10, 2003 entitled SYSTEM AND METHOD FOR MANAGING FILE DATA DURING CONSISTENCY POINTS
AD		10/705,025		HAMILTON et al.		U.S. Patent Application filed November 10, 2003 entitled SYSTEM AND METHOD FOR MANAGING FILE METADATA DURING CONSISTENCY POINTS
		6,571,261	B1	WANG-KNOP et al.	05-27-2003	
		6,397,311	B1	CAPPS	05-28-2002	
		6,643,654	B1	PATEL et al.	11-04-2003	
		5,963,962		HITZ et al.	10-05-1999	
		6,038,570		HITZ et al.	03-14-2000	
		5,819,292		HITZ et al.	10-06-1998	
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		5,485,579		HITZ et al.	01-16-1996	
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		5,931,918		ROW et al.	08-03-1999	
		5,941,972		HOESE et al.	08-24-1999	

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
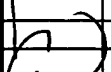
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Substitute for form 1449A/PTO  <h2 style="text-align: center;">INFORMATION DISCLOSURE STATEMENT BY APPLICANT</h2> <p style="text-align: center;">(use as many sheets as necessary)</p>		<h3 style="text-align: center;">Complete if Known</h3> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Application Number</td> <td>10/705,470</td> </tr> <tr> <td>Filing Date</td> <td>November 10, 2003</td> </tr> <tr> <td>First Named Inventor</td> <td>Robert L. Fair et al.</td> </tr> <tr> <td>Group Art Unit</td> <td>2184</td> </tr> <tr> <td>Examiner Name</td> <td>Not yet assigned</td> </tr> <tr> <td>Attorney Docket Number</td> <td>112056-0123</td> </tr> </table>		Application Number	10/705,470	Filing Date	November 10, 2003	First Named Inventor	Robert L. Fair et al.	Group Art Unit	2184	Examiner Name	Not yet assigned	Attorney Docket Number	112056-0123
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		6,065,037		HITZ et al.	05-16-2000	
		US2002/0116593	A1	KAZAR et al.	08-22-2002	
		US2002/0112022	A1	KAZAR et al.	08-15-2002	
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		5,907,672		MATZE et al.	05-25-1999	
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		6,173,293		THEKKATH et al.	01-09-2001	

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10/705.470

November 10, 2003

Robert L. Fair et al.

2184

Not yet assigned

112056-0123

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Filing Date		November 10, 2003	
First Named Inventor		Robert L. Fair et al.	
Group Art Unit		2184	
Examiner Name		Not yet assigned	
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OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		"NETWORK APPLIANCE ENDS NAS/SAN WAR" by COMPUTERWIRE, <a href="http://www.theregister.co.uk/content/63/27368.html">http://www.theregister.co.uk/content/63/27368.html</a> ; posted on February 10, 2002	
		DAVID HITZ et al. TR3002 File System Design for a NFS File Server Appliance published by Network Appliance, Inc.	
		Common Internet File System (CIFS) Version: CIFS-Spec 0.9, Storage Networking Industry Association (SNIA), Draft SNIA CIFS Documentation Work Group Work-in-Progress, Revision Date: 3/26/2001	
		Fielding et al. (1999) Request for Comments (RFC) 2616, HTTP/1.1	
		Celerra File Server Architecture for High Availability, EMC2 where information lives, August 1999, pp. 1-7.	
		RON LENIVE and MICHELLE GERVAIS, Building a SAN, SunExpert Magazine, March 1999, pp50-64	
		Unix Workstation System Administration Education Certification Course, January 8, 2002	
		Auspex Systems, LFS - A Local File System for Multiprocessor NFS Network Servers, 1994	
		Maintenance Procedures ND (8C) nd-network disk control February 1985	
		Misc. Reference Manual Pages ND (4P) nd-network disk driver 26 July 1985	
	Asante EN/SC Adapter Family Installation Guide May 1994		

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Sheet	5	of	5

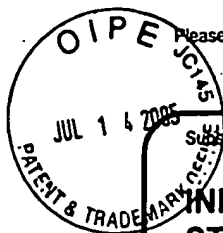
OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
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		Asante Desktop EN/SC Adapters User's Manual April 1996	
		Performance Without Compromise: The Virtual Storage Architecture 1997	
		CALLAGHAN B. "NFS Version 3 Protocol Specification", Request for Comments (RFC) 1813 June 1995	
		International Search Report PCT/US03/23597, 03-09-2004, 7 pages, International Searching Authority, Alexandria, Virginia, USA	
		International Search Report PCT/US03/23597, 04-14-2004, 8 pages, International Searching Authority, Alexandria, Virginia, USA	

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A	1	4,570,217		Allen et al.	02-11-1986	
	2	5,163,131		Row et al.	11-10-1992	
A	3	5,202,979		Hillis et al.	04-13-1993	
	4	5,278,979		Foster et al.	01-11-1994	

### OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

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A	5	AKYUREK, SEDAT, <i>Placing Replicated Data to Reduce Seek Delays</i> , Department of Computer Science, University of Maryland, UMIACS-TR-91-121, CS-TR-2746, August 1991.
	6	BITTON, DINA, <i>Disk Shadowing</i> , Proceedings of the 14 <sup>th</sup> VLDB Conference, LA, CA 1988.
	7	CHAUDHURI, SURAJIT, ET AL., <i>Self-Tuning Technology in Microsoft SQL Server</i> , Data Engineering Journal 22, 2 1999 pp. 20-27.
	8	CHUTANI, SAILESH, ET AL., <i>The Episode File System</i> , In Proceedings of the USENIX Winter 1992.
	9	COYNE, ROBERT A., ET AL., <i>Storage Systems for National Information Assets</i> , Proc. Supercomputing 92, Minneapolis, Nov. 1992, pp. 626-633.
	10	FINLAYSON, ROSS S., ET AL., <i>Log Files: An Extended File Service Exploiting Write-Once Storage</i> Department of Computer Science, Stanford University, Report No. STAN-CS-87-1177, September 1987.
	11	GRAY, JIM, ET AL., <i>The Recovery Manager of the System R Database Manager</i> , ACM Computing Surveys, (13)2:223-242 1981.
A	12	HECHT, MATTHEW S., ET AL. <i>Shadowed Management of Free Disk Pages with a Linked List</i> , ACM Transactions on Database Systems, 8/4, December 1983, pp. 503-514.
	13	HOWARD, JOHN, H. ET AL., <i>Scale and Performance in a Distributed File System</i> , Carnegie Mellon University, CMU-ITC-87-068, August 1987.

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[Signature]	14	HOWARD, JOHN H., <i>An Overview of the Andrew File System</i> , Carnegie Mellon University, CMU-ITC-88-062 1988.	
	15	HOWARD, JOHN, H. ET AL., <i>Scale and Performance in a Distributed File System</i> , ACM Trans. Computer System, 6(1), Feb. 1988 pp. 51-81.	
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	17	KAZAR, MICHAEL L., ET AL., <i>DEcorum File System Architectural Overview</i> , USENIX Summer Conference, Anaheim, California, 1990.	
	18	KEMPER, ALFONS, ET AL., <i>Performance Tuning for SAP R/3</i> , Data Engineering Journal 22, 2 1999 pp. 33-40.	
	19	KENT, JACK ET AL., <i>Optimizing Shadow Recovery Algorithms</i> , IEEE Transactions on Software Engineering, 14(2): 155-168, February 1988.	
	20	KISTLER, ET AL., <i>Disconnected Operation in the Coda File System</i> , ACM Transactions on Computer Systems, Vol. 10, No. 1, February 1992, pp 3-25.	
	21	LORIE, RAYMOND, A. <i>Physical Integrity in a Large Segmented Database</i> , ACM Trans. Database Syst., vol. 2, March 1977, pp. 91-104.	
	22	OUSTERHOUT, JOHN ET AL., <i>Beating the I/O Bottleneck: A Case for Log-Structured File Systems</i> , Technical Report, Computer Science Division, Electrical Engineering and Computer Sciences, University of California at Berkeley, October 30, 1988.	
[Signature]	23	PATTERSON, D., ET AL., <i>A Case for Redundant Arrays of Inexpensive Disks (RAID)</i> , Technical Report, CSD-87-391, Computer Science Division, Electrical Engineering and Computer Sciences, University of California at Berkeley 1987.	
	24	PATTERSON, D., ET AL., <i>A Case for Redundant Arrays of Inexpensive Disks (RAID)</i> , SIGMOD International Conference on Management of Data, Chicago, IL, USA, 1-3 June 1988, SIGMOD RECORD (17)3:109-16 Sept. 1988.	
[Signature]	25	PETERSON, ZACHARY NATHANIEL JOSEPH, <i>Data Placement for Copy-on-Write Using Virtual Contiguity</i> , University of CA, Santa Cruz, Master's Thesis for the Department of Science in Computer Science, September 2002.	

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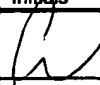

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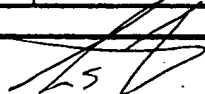
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Application Number	10/705,470
Filing Date	November 10, 2003
First Named Inventor	Robert L. Fair et al.
Group Art Unit	2184
Examiner Name	Not yet assigned
Attorney Docket Number	112056-0123

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	31	SCHIEFER, BERNI, ET AL., <i>DB2 Universal Database Performance Tuning</i> , Data Engineering Journal 22, 2 1999 pp. 12-19.	
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	35	SUBRAMANIAN, MURALIDHAR, ET AL., <i>Performance Challenges in Object-Relational DBMSs</i> , Data Engineering Journal 22, 2 1999 pp 28-32.	
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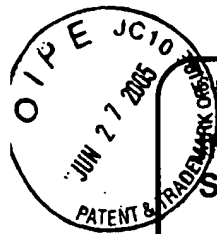
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### Complete if Known

Application Number	10/705,470
Filing Date	November 10, 2003
First Named Inventor	Robert L. Fair et al.
Group Art Unit	2184
Examiner Name	Not yet assigned
Attorney Docket Number	112056-0123

### U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
CJ	1	Re. 34,100		Hartness	10-13-1992	
	2	4,156,907		Rawlings, et al.	05-29-1979	
	3	4,399,503		Hawley	08-16-1983	
	4	4,598,357		Swenson et al.	07-01-1986	
	5	4,688,221		Nakamura et al.	08-18-1987	
	6	4,698,808		Ishii	10-06-1987	
	7	4,761,785	B1	Clark et al.	08-02-1988	
	8	4,805,090		Coogan	02-14-1989	
	9	4,837,675		Bean et al.	06-06-1989	
	10	4,864,497		Lowry et al.	09-05-1989	
	11	4,896,259		Jacobs et al.	01-23-1990	
	12	4,899,342		Potter et al.	02-06-1990	
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	16	5,426,747		Weinreb et al.	06-20-1995	
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	18	6,636,879	B1	Doucette et al.	10-21-2003	

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W	20	Administration Guide found at <a href="http://www.openafs.org/pages/doc/AdminGuide/auagd010.htm">http://www.openafs.org/pages/doc/AdminGuide/auagd010.htm</a> , visited on 3/2/2005	
	21	BASILICO, ET AL., <i>Error Correction System Using "Shadow Memory,"</i> IBM Technical Disclosure Bulletin, May 1984, pp. 5792-5793	
	22	BITTON, DINA, <i>Disk Shadowing</i> , Proceedings of the 14 <sup>th</sup> VLDB Conference, LA, CA (1988)	
	23	BLASGEN, M.W. ET AL., <i>System R: An architectural Overview</i> , Reprinted from IBM Systems Journal Vol. 20, no. 1, 1981 © 1981, 1999	
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	25	BROWN, MARK R. ET AL., <i>The Alpine file system</i> , ACM Transactions on Computing Systems, 3(4):261--293, November 1985	
W	26	CHEN, PETER M., ET AL., <i>An Evaluation of Redundant Arrays of Disks Using an Amdahl 5890 Performance Evaluation</i> , pp. 74-85, 1990	
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	28	CLARK, B.E., ET AL., <i>Application System /400 Performance Characteristics</i> , IBM Systems Journal, 28(3): 407-423, 1989	
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W	31	DOUGLIS, FRED, ET AL., <i>A comparison of two distributed systems: Amoeba and Sprite - Computing Systems</i> , 4(4), Fall 1991, pp. 353-385 ?{copy of article I have has no date or cite}	
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W	33	HARTMAN, JOHN H. ET AL., <i>Performance Measurements of a Multiprocessor Sprite Kernel</i> , Proceedings of the USENIX Conference, 1990	
	34	HITZ, DAVE ET AL., <i>File System Design for an NFS File Server Appliance</i> , Technical Report 3002, Rev. C395, presented Jan. 19, 1994	
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A	35	HOWARD, JOHN H, ET AL., <i>Scale and Performance in a Distributed File System</i> , Carnegie Mellon University, CMU-ITC-87-068, Aug. 5, 1987	
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		<u>The IBM System/38, Chapter 8, pp. 137-15</u>	
	38		
A	39	ISOMAKI, MARKUS, <i>Differentiated Service for the Internet</i> , Department of Technical Physics and Mathematics, May 9, 1998	
A	40	KAZAR, MICHAEL L., ET AL., <i>Decorum File System Architectural Overview</i> , USENIX Summer Conference, Anaheim, California, 1990	
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A	42	LORIE, RAYMOND, A., <i>Physical integrity in a large segmented database</i> , ACM Trans. Database Systems, (2): 91-104, March 1977	
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	50	OUSTERHOUT, JOHN K. ET AL., <i>The Sprite Network Operating System</i> , Computer Science Division, Department of Electrical Engineering and Computer Sciences, Univ. of CA, Berkley, Nov. 19, 1987	
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	60	ROSENBLUM, MENDEL, ET AL., <i>The LFS Storage Manager</i> , Computer Science Division, Electrical Engin. And Computer Sciences, Univ. of CA, presented at Summer '90 USENIX Technical Conference, Anaheim, CA June 1990	

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W	61	ROSENBLUM, MENDEL, ET AL., <i>The Design and Implementation of a Log-Structured File System</i> July 24, 1991 pp1-15.	
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